INTRODUCTION TO ELECTRONIC COMMERCE WITH THE DEPARTMENT OF DEFENSE

A HANDBOOK FOR BUSINESS

May 2002

PREFACE

INTRODUCTION TO ELECTRONIC COMMERCE WITH THE DEPARTMENT OF DEFENSE:

A HANDBOOK FOR BUSINESS

The Department of Defense (DoD) and the Defense Electronic Business Program Office welcome your interest in Electronic Commerce (EC). This handbook will help you learn about EC, how to become an EC Provider, and how to use the advantages of EC to meet the competitive demands of the global marketplace.

This handbook is a tool that will help you develop a greater understanding of how EC is working successfully. You will learn the role of Electronic Commerce Interoperability Process (ECIP), how to register with the Central Contractor Registration (CCR), and much more. This handbook also provides details about the different participants in the Federal Government EC process.

We have included summaries at the beginning of each chapter to better assist you with gaining information. Should you have any questions after you have read this handbook, please contact the Electronic Commerce Information Center (ECIC) at:

Defense Electronic Business Program Office
8725 John J. Kingman Road, Mail Stop 6205
Fort Belvoir, Virginia 22060-6205
Web site: http://www.defenselink.mil/acq/ebusiness
E-Mail: dlis-support@dlis.dla.mil

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Monday-Friday, except Federal Holidays

INTRODUCTION TO ELECTRONIC COMMERCE

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EXECUTIVE SUMMARY

OVERVIEW

In October 1993, President Clinton initially mandated executive branch Agencies and departments to begin using Electronic Commerce (EC). A year later, Congress passed the Federal Acquisition Streamlining Act of 1994 that required the entire Federal Government to begin using EC.

The entire Federal Government and the Department of Defense (DoD) are using EC to increase the efficiency of the Government's procurement process, to reduce cost, and to eliminate paper.

In November 1997, the Secretary of Defense released the Defense Reform Initiative Report (DRIR) introducing the principles of Electronic Business (EB). The report stated that "a full commitment to electronic business operations will not only result in tangible savings, but will also change the DoD's business culture, forcing managers to think differently and act more efficiently." Thus, by using EB principles, the concept of EC has been propelled beyond the EC standards process.

CHAPTER SUMMARIES

Chapter One introduces the concept of Electronic Commerce (EC) and describes the benefits of using EC, the functions incorporated within the EC process, and expected developments in the EC Industry.

Chapter Two describes how EC works over the Internet, and how both the Federal Government and private industry are using the Internet to exchange data.

Chapter Three describes the basic facts of Electronic Data Interchange (EDI). This chapter will inform you of the methods and the business environments in which EDI is used. It also lists the many benefits of EDI, the role of a Trading Partner, and describes the typical flow of EDI public procurement transactions.

Chapter Four provides information about DoD Business Opportunities (DoDBusOpps) and Electronic Bid Solicitation (EBS) processes. It explains how these processes work in DoD contracting.

Chapter Five presents an overview of the new Electronic Commerce Interoperability Process (ECIP), which replaced the Value-Added Network (VAN) Licensing Agreements (VLA). This chapter defines and explains some of the terminology and concepts used for connecting and operating on the DoD Electronic Commerce Infrastructure (ECI).

Chapter Six provides information on how to register with the DoD. It also explains the purpose and benefits of registration, and the importance of the registration process.

Chapter Seven outlines different ways to sell goods and/or services to the Federal Government.

CHAPTER ONE
ELECTRONIC COMMERCE

CHAPTER SUMMARY

This chapter introduces the concept of Electronic Commerce (EC) and describes the benefits of using EC, the functions incorporated within the EC process, and expected developments in the EC Industry.

WHAT IS ELECTRONIC COMMERCE?

EC is the interchange and processing of information using electronic techniques for accomplishing business within the framework of commercial standards and practices. Further, an integral part of implementing EC is the application of business process improvements or reengineering principles to streamline business processes prior to the incorporation of technologies facilitating the electronic exchange of business information.

EC is the paperless exchange of business information. The following is a partial list of some of the techniques being used in the industry to assist companies in doing business electronically:

- Electronic Data Interchange (EDI)
- Electronic Mail (E-Mail)
- Business Opportunities (BusOpps)
- Purchase Cards
- General Services Administration (GSA)
- Electronic Funds Transfer (EFT)
- Electronic Catalogs (ECAT)
- Electronic Malls (EMALLs)
- Electronic Data Access (EDA)
- DoD Electronic Business Exchange (DEBX)
- Wide Area Workflow – Receipts and Acceptance (WAWF-RA)
- Procurement Sites

An integral goal of implementing EC is to assist commercial and Federal Government Agencies with the exchange of electronic data. EC enables businesses to exchange documents more rapidly and with greater accuracy.

A common feature of all these techniques is that they use the Internet. Sophisticated Internet technologies (for more information on Internet Technology, see Appendix A) and easy-to-use Web tools have expanded the potential of using EC.

These technologies enable Federal Government Agencies to streamline the acquisition process and to eliminate time-consuming business practices, ultimately benefiting those doing business electronically. EC also enables contractors to receive faster payments, expand their markets, improve the operating efficiencies, reduce the response time, and decrease the reliance on paper.

ELECTRONIC DATA INTERCHANGE

Electronic Data Interchange (EDI) is a part of EC. EDI is the computer-to-computer electronic exchange of business information using a specified format. The exchange takes place between what is known as "Trading Partners". Chapter 3 explains EDI in more detail.

A Trading Partner is an organization or individual with whom information or data is accessed or exchanged. The term Trading Partner includes private industry, academia, and Federal Government entities. In the current context of this document, a Trading Partner is any business that has registered with the Central Contractor Registration (CCR) and conducts business electronically with the Federal Government. See Chapter Six for more information on CCR.

ELECTRONIC MAIL

Electronic Mail (E-Mail) is one of the most frequently used applications on the Internet. Many people have access to the Internet at school, home, and/or work. They use the Internet to send and receive E-Mail messages. Appendix A explains more fully the terms and concepts associated with the Internet.

Sending E-Mail messages is fast and easy. It is only a matter of logging on to the E-Mail Service Provider, creating the message, and clicking the “send” button. The message goes to the designated Internet Service Provider (ISP), which in turn sends the message to the recipient's mail server. On the way, the message may go through several servers, each reading the domain name in order to route it to the recipient's server.

The main benefits of E-Mail are:

- Ease and speed of message transmission;
- Ability to send messages worldwide;
- Ability to duplicate and send messages to several parties at one time;
- Ability to incorporate files from different software packages for the recipient to view;
- Ability to respond quickly to urgent messages;
- Virtual elimination of paper.

ON-LINE LISTING OF SOLICITATIONS

One of the most complete listings of Federal Government solicitations can be found on FedBizOpps. FedBizOpps contains notices of proposed Federal Government procurement actions, contract awards, and sales of Government property. These lists are proposed procurement actions that are estimated at $25,000 and above. FedBizOpps is available at: http://www.FedBizOpps.gov.

DOD BUSINESS OPPORTUNITIES

The DoD Business Opportunities (DoDBusOpps) Web site offers contracting information for vendors to review on-line. DoDBusOpps was created to provide links to Web-based systems that post DoD solicitations. DoDBusOpps lists all DoD on-line solicitations. Chapter 4 explores DoDBusOpps in more detail. Access to the DoDBusOpps is available at: http://dodbusopps.com.

BUSINESS OPPORTUNITIES AVAILABLE THROUGH GSA

The General Services Administration (GSA) purchases goods and services for the Federal Government, civilian Agencies, the military, the Federal Courts, and the U.S. Congress. GSA procurement is both national and international in scope.

For more information on business opportunities with GSA, visit the GSA Web site at: http://www.gsa.gov. Information about the Federal Supply Schedule Program is available at: http://www.gsa.gov/Portal/content/orgs_content.jsp?contentOID=22892&contentType=1005.

PURCHASE CARDS

In less than a decade, the Federal Government has changed its purchasing habits through the use of the purchase card. For example, in Fiscal Year (FY) 1989, the Federal Government purchased less than $1 million in goods and services using purchase cards. In FY98, the Government purchased more than $5 billion by using purchase cards. Nearly every Agency is making increased usage of purchase cards.

Use of the purchase card is required for micro-purchases (those valued at less than $2,500), and is being increasingly used for payment on contracts and orders. During the first quarter of Fiscal Year 1999, over 81% of all micro-purchases in the DoD were made using the purchase card. Purchase cards are currently accepted by more than 14 million vendors and can now be used at electronic catalogs and malls.

For more information on the purchase card visit: http://purchasecard.saalt.army.mil/.

ELECTRONIC FUNDS TRANSFER

Electronic Funds Transfer (EFT) is the electronic exchange of payment and remittance information. Starting in 1999, all Federal payments must be made by EFT instead of paper checks, according to the revised edition of the Debt Collection Improvement Act of 1996. For more information on the Debt Collection Improvement Act of 1996, visit: http://www.fms.treas.gov/debt/regulations.html.

The purpose of the EFT legislation is to take advantage of the improved convenience, reduced cost, and increased Internet security of delivering payments electronically. EFT includes Direct Deposit, Automated Teller Machines (ATM), point-of-sale, and credit card transactions.

ELECTRONIC CATALOGS

Electronic Catalogs (ECATs) are Internet-based entities that allow Agency buyers to browse products and services, compare prices, place orders, and make payments using Federal Government purchase cards.

ECATs help reduce the order cycle time and the resources that Agency buyers need to make purchases. By using these catalogs, Agencies gain a greater awareness of the products and services available, making them better equipped to make wiser purchases.

Some of the better-known ECATs are:

- The Air Force's Country Store: http://eschq.hanscom.af.mil/CSTORE/
- The Defense Logistics Agency's
  - Defense Supply Center Philadelphia (DSCP): http://www.dscp.dla.mil/
  - Defense Supply Center Richmond (DSCR): http://www.dscr.dla.mil/
  - Defense Supply Center Columbus (DSCC): http://www.dscc.dla.mil/
  - Defense Reutilization and Marketing Service (DRMS): http://www.drms.dla.mil/
- The Department of Justice's UNICOR Federal Prison Industries On-line Shopping Catalog: http://www.unicor.gov/
- GSA's Advantage!: http://www.gsaadvantage.gov/
- NASA's Government-Wide Massbuy Contracts Homepage: http://genesis.gsfc.nasa.gov/nasa/adpmass.htm
- National Industries for the Blind: http://www.jwod.com/
- Naval Inventory Control Point (NAVICP): http://www.navicp.navy.mil/
- The Navy's Electronic Commerce On-line (NECO): http://www.neco.navy.mil/.
- The Navy's Information Technology Electronic Catalog (ITEC) Direct: http://itec-direct.navy.mil/
- The Office of Federal Procurement Policy (OFPP)'s ARNet: http://www.arnet.gov/

ELECTRONIC MALLS

Electronic Malls (EMALLs), including DoD's EMALL, consist of several ECATs spliced together. At EMALLs, Federal Government buyers can access supplier catalogs in "mall"-type settings. To have a presence on an EMALL, vendors must submit their catalogs in an electronic format.

The DoD EMALL complements the primary DoD ordering mechanism. It is a method targeted to the discretionary purchase card user, and/or commercial part number shoppers. The EMALL gives additional choice that is made available by the Internet technology, search engines, distributed databases and credit card ordering. It is a flexible system which provides more services to get what is needed, when it's needed, and at a price that is reasonable. The DoD EMALL is constantly being updated with new information to fit the needs of the end-user, and is available at: http://www.emall.dla.mil/.

PROCUREMENT SITES

Federal Government Agencies that tend to focus on larger procurements have developed their own procurement-related sites on the Internet. Most of these sites contain bidders lists, drawings and specifications, announcements of bidders conferences, questions from vendors regarding solicitations (as well as Agency responses), and Request For Proposals (RFPs) that can be downloaded. For the Department of Defense, the aforementioned DoDBusOpps is the procurement site, available at: http://dodbusopps.com.

HELP

For further questions and/or concerns, please contact:

Electronic Commerce Information Center (ECIC) at (800) 334-3414 (Monday – Friday, 8 a.m.- 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

CHAPTER TWO
ELECTRONIC COMMERCE OVER THE INTERNET

CHAPTER SUMMARY

This chapter describes how Electronic Commerce (EC) works over the Internet, and how both the Federal Government and private industry are using the Internet to exchange data.

THE INTERNET

The Internet is a communication network that is used to link millions of computers together. These linked computers exchange information with different sources.

In today's society, the Internet can provide information in different languages, interpret data regardless of the hardware or software that is used, navigate from one site to another, and many other functions. The Internet is an extremely capable source for researching data and providing effective and efficient answers to many questions and issues.

Appendix A explains more fully the terms and concepts associated with the Internet.

DOING BUSINESS VIA THE INTERNET

Vendors or companies can communicate and do business with the Federal Government electronically and instantly. They communicate with the Government contracting offices through the Internet and/or the Value-Added Networks (VANs) using the Electronic Commerce Interoperability Process (ECIP). This process has improved overall customer satisfaction among both commercial and Government users of the Electronic Commerce Infrastructure (ECI). The ECIP emphasizes economic forces, customer requirements, and customer satisfaction as the primary determinants of the services and capabilities. Vendors use the Internet and/or the VANs to connect to Government contracting offices in order to review Government Requests for Information and Requests for Purchases, bid on contracts, search for goods or services, provide profiles on Trading Partners, etc.

The Internet connects contractors to the Central Contractor Registration (CCR)/Central Contractor Registration Interface (CCRI). The CCR is the single place for contractors to register when conducting business with the Federal Government. It is the Government's repository of contractor data pertinent to procurement and payment for services and products. The Internet provides service and entry into this system. See Chapter 6 for more in-depth information on CCR.

A Trading Partner is an organization or individual with whom information or data is accessed or exchanged. The term Trading Partner includes private industry, academia, and Federal Government entities. In the context of this document, a Trading Partner is any business that has registered with the Central Contractor Registration (CCR) and conducts business electronically with the Government.

A Value-Added Network (VAN) is a third-party communications company that provides the skills and expertise to render EDI services such as electronic post offices; data translation; and message storage, sorting, retrieval, etc., to registered Trading Partners. A VAN is often referred to as an electronic clearinghouse for data -- a third-party service provider that functions similarly to a long distance telephone company and/or a computer on-line service. VANs are discussed in greater detail in Chapter 5. A current list of authorized Federal Government VANs is available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/vans.htm.

INTERNET SERVICE PROVIDER

If communication with the Department of Defense (DoD) over the Internet is desired, the services of an Internet Service Provider (ISP) will be needed. This company will connect the business via modem or network to the Internet. One should select an ISP that supports at least a 33.6 Kbps modem and offers unlimited services.

If a VAN is selected as a service provider, the VAN will gather the information necessary to conduct business with the Federal Government.

USING THE INTERNET

When using the Internet to transmit EC transactions, the following processes occur:

- A computer transfers information by converting an electronic application into a User Defined Format (UDF) for transmission to the Trading Partner.
- This data is converted from a UDF into ANSI ASC X12 format.
- The data is then sent over the Internet to the relevant Trading Partner using E-Mail or File Transfer Protocol (FTP).
- The Trading Partner or VAN receives the E-Mail and converts the ANSI ASC X12 data back into an application format.

The advantages to using the Internet are that it's easy to implement and it transmits the data accurately and rapidly.

Currently, most EC transactions are done over the Internet via VANs, Defense Electronic Business Exchange (DEBX), Government Gateways, Government procurement Agencies, private industry Trading Partners, ECATs, EMALLs, and other electronically-based systems.

HOW THE GOVERNMENT USES THE INTERNET

Federal Agencies are using the Internet in a number of ways for procurement purposes. Solicitations for large purchases (over $25K) are posted at FedBizOpps. FedBizOpps provides abstracts of these solicitations as well as contact information on how to order the full Request for Proposal (RFP) or Request for Quote (RFQ). FedBizOpps is available at: http://www.FedBizOpps.gov.

A few Agencies, such as NASA, have been granted waivers from the normal procurement procedures. NASA, in particular, has developed the Web-based NASA Acquisition Internet

Service (NAIS) to facilitate the exchange of procurement information with its vendors. NAIS is available at: http://prod.nais.nasa.gov/cgi-bin/nais/index.cgi.

The DoD Business Opportunities (DoDBusOpps) Web site offers business advantages to vendors who are using the Internet to review on-line solicitations. DoDBusOpps was created to provide links to Web-based systems that post all DoD contracts. Chapter 4 explores DoDBusOpps in more detail. DoDBusOpps is available at: http://dodbusopps.com/.

The General Services Administration (GSA) operates the on-line catalog, GSA Advantage!, where Federal Government buyers can browse descriptions of GSA schedule items, comparison shop among the participating vendors, and pay for their purchases using their Government credit card. GSA Advantage! is available at: http://www.gsaadvantage.gov/.

The Small Business Administration offers PRONet, a database of information on more than 171,000 small, disadvantaged, 8(a) and woman-owned businesses, for use by contractors seeking small business contractors, subcontractors, and/or partnership opportunities. The PRONet is available at: http://pro-net.sba.gov/.

Several Agencies now offer procurement and acquisition-related Web sites. Most of these sites contain bidders lists, announcements of bidders conferences, questions from vendors regarding the solicitation (as well as Agency responses), and downloadable versions of RFPs.

HOW COMPANIES USE THE INTERNET

Companies are using the Internet to exchange EC transactions. By using encryption and other methods of technology, documents are sent over the publicly accessible Internet to larger companies. The Internet also helps small businesses to become electronically capable. Conducting EC via the Internet provides easy access and may be used between Web-enabled sites to access speed.

There are three primary ways that companies may elect to use the Internet:

- Some companies use encryption. Encryption is the process that scrambles the contents of a file before sending it over the Internet, for protection of the data. The recipient must have software to "decrypt" this file, which is held only by authorized recipients. The authorized user will need to unscramble the data and read the message.

- Other companies use E-Mail or Simple Mail Transfer Protocol (SMTP) for the protocol to send and receive information between servers on the Internet.

- Some companies use the Value-Added Services (VAS) process of VANs. These VAS offer their customers a way to exchange transactions over the Internet. The VANs access the DEBX by using FTP or SMTP over the Internet.

ELECTRONIC CATALOGS

Recently, many Federal Agencies and industry suppliers have posted Web-based Electronic Catalogs (ECATs) on the Internet, allowing Agency buyers to browse items, compare prices, and place orders using Government purchase cards.

Electronic catalogs help shorten order cycle time and reduce the resources Agency buyers need to make purchases. By using these catalogs, Agencies gain a greater awareness of the products and services available, making them better equipped to comparison shop and to make wiser purchases.

Some of the better-known ECATs are:

- The Air Force's Country Store: http://eschq.hanscom.af.mil/CSTORE/
- The Defense Logistics Agency's:
  Defense Supply Center Philadelphia (DSCP): http://www.dscp.dla.mil/
  Defense Supply Center Richmond (DSCR): http://www.dscr.dla.mil/
  Defense Supply Center Columbus (DSCC): http://www.dscc.dla.mil/
  Defense Reutilization and Marketing Service (DRMS): http://www.drms.dla.mil/
- The Department of Justice's UNICOR Federal Prison Industries On-line Shopping Catalog: http://www.unicor.gov/
- GSA's Advantage!: http://www.gsaadvantage.gov/
- NASA's Government-Wide Massbuy Contracts Homepage: http://genesis.gsfc.nasa.gov/nasa/adpmass.htm
- National Industries for the Blind: http://www.jwod.com/
- Naval Inventory Control Point (NAVICP): http://www.navicp.navy.mil/
- The Navy's Electronic Commerce On-line (NECO): http://www.neco.navy.mil/.
- The Navy's Information Technology Electronic Catalog (ITEC) Direct: http://itec-direct.navy.mil/
- The Office of Federal Procurement Policy's (OFPP) ARNet: http://www.arnet.gov/.

ELECTRONIC MALLS

Electronic Malls (EMALLs), like DoD's EMALL, consist of several ECATs spliced together. At EMALLs, Federal Government buyers can access supplier catalogs in "mall"-type settings. To have a presence on an EMALL, vendors must submit their catalogs in an electronic format. The DoD EMALL is available at: http://www.emall.dla.mil/.

In the future, most Government buyers will select their micro-purchases using EMALLs. Their purchase orders, delivery orders, invoices, and other documents will be sent to the seller over the Internet and their payments will be made either by credit card or by Electronic Funds Transfer (EFT).

HELP

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CHAPTER THREE
ELECTRONIC DATA INTERCHANGE

CHAPTER SUMMARY

This chapter describes the basic facts of Electronic Data Interchange (EDI). This chapter will inform you of the methods and the business environments in which EDI is used. It also lists the many benefits of EDI, the role of a Trading Partner, and describes the typical flow of EDI public procurement transactions.

WHAT IS ELECTRONIC DATA INTERCHANGE?

Electronic Data Interchange (EDI) is the computer-to-computer exchange of business data in standard formats. In EDI, information is organized according to a specified format set by both parties. The EDI standards are developed and maintained by the Accredited Standards Committee (ASC) X12. The standards are designed to work across industry and company boundaries. Changes and updates to the standards are made by consensus, reflecting the needs of the entire base of standards users, rather than those of a single organization or business sector. As of 2002, more than 300,000 organizations use the 300+ EDI transaction sets to conduct business. In this document, the scope of discussion of EDI will be limited to its use in exchanging information between Federal Government entities and Trading Partners in a contracting environment.

HISTORY OF EDI

Organizations traditionally have conducted business on paper, often using preprinted business forms to exchange information with trading partners. With the explosive growth of these paper-based exchanges, and the amount of data associated with the manufacture and sale of new products and services, many organizations have been forced to seek a more expedient way to communicate and process business data.

The widespread use of computers for commercial business applications and the introduction of techniques for computer telecommunications enabled the solution. Early electronic interchanges used proprietary formats agreed upon between two trading partners for this purpose. However, the disadvantages of programming the widely varying formats required by different trading partners mitigated some of the benefits of this method of interchange.

In the 1960s, some industry groups began a cooperative effort to develop industry EDI standards for purchasing, transportation, and financial applications. Many of these standards supported only intra-industry trading, but others, such as bills of lading and freight invoices, were applicable across industries. Eventually the idea of national standards for use across industries received substantial support.

In the late 1970s, using the pioneering work of the Transportation Data Coordinating Committee and the National Association of Credit Management's Credit Research Foundation, ASC X12 began the development of its first standards for electronic data interchange. In 1983, ANSI published the first five American National Standards for EDI. In 1989, Version 2, Release 4 was

published and contained 32 standards. In 1993, Version 3, Release 4 contained 192 Draft Standards for Trial Use, including most of the transportation and retail industries' standards.

Although today there are many syntaxes for EDI, only two are widely recognized: ANSI ASC X12 and the Electronic Data Interchange for Administration, Commerce, and Transport (EDIFACT). Implementation of EDI systems within the Federal Government is not mandated, however, when Federal departments or agencies do implement EDI systems, use of the ANSI ASC X12 and EDIFACT families of standards with specified constraints are required. More information on the Federal Standards for EDI may be found in Federal Information Processing Standards (FIPS) Publication 161-2 at: http://www.itl.nist.gov/fipspubs/fip161-2.htm.

Currently, virtually all large private-sector companies nationwide use EDI, including Federal Express, WalMart, American Airlines, Nike, Staples, JCPenney, and Prudential Insurance. These companies cover a wide range of services and products including manufacturing, shipping, warehousing, utilities, pharmaceutical, construction, petroleum, metals, food processing, banking, insurance, retail, health care, and textiles.

As part of the President's Electronic Commerce initiative, and in cooperation with the Chief Financial Officer's Electronic Commerce committee, the Defense Finance and Accounting Service (DFAS) is assisting with widespread adoption and implementation of Electronic Commerce/Electronic Data Interchange (EC/EDI) within the Department of Defense accounting and finance systems.

To assist the Department of Defense and the DFAS Director in achieving their electronic commerce, electronic data interchange and paperless contracting goals, DFAS has initiated several large scale efforts, including Web Invoicing System (WInS), Wide Area Workflow (WAWF), Electronic Document Access (EDA), Electronic Document Management (EDM), Electronic Data Interchange (EDI), and Electronic Funds Transfer (EFT).

WHAT IS A TRADING PARTNER?

A Trading Partner is an organization or individual with whom information or data is accessed or exchanged. The term Trading Partner includes private industry, academia, and Federal Government entities. In the context of this document, a Trading Partner is any business that has registered with the DoD Central Contractor Registration (CCR) and conducts business electronically with the Federal Government. Chapter 5 contains more information on CCR and how to register to become a Trading Partner.

WHY USE EDI?

EDI provides new business opportunities in both the Federal Government and commercial markets. By using EDI, it is recommended that a business register as a Trading Partner because it will allow the Trading Partner to remain competitive within the business arena. There are several good reasons why EDI should be used, especially when there is an intention to do business with other branches of the Federal Government, including:

Greater business opportunities. EDI helps you secure business not only with the Federal Government, but also with many private-sector Trading Partners through the wider dissemination of procurement information.

Greater efficiency. Electronic documents flow more rapidly and less expensively than paper equivalents.

Improvements in overall quality. EDI entails better record keeping, fewer errors in data, reduced processing time, less reliance on human interpretation of data, and reduced unproductive time.

Reduced inventory. EDI permits faster and more accurate filling of orders. It helps reduce inventory and supports "just-in-time" inventory management.

Lower mailing costs. EDI helps lessen mailroom sorting and distribution time. It reduces postage and other mailing costs, and prevents the loss of documents.

Reduced order time. EDI is much faster in processing orders than paper-based systems.

Faster billing. EDI orders are filled and delivered in a timelier manner, thus speeding up billing and closeout processes.

Better information for management decision-making. EDI provides accurate information and audit trails of transactions. This enables businesses to identify areas offering the greatest potential for improving efficiency and reducing costs.

HOW DOES EDI WORK?

In the Federal Government context, the exchange of electronic public procurement documents usually goes through the following process:

- The Government transmits a Request for Quotation (RFQ) to Trading Partners who are registered in the CCR.
- Trading Partners respond by sending a Bid Response to the RFQ via their Value-Added Network (VAN).
- The Government buyer reviews all received responses.
- The Government selects the winning contractor based upon bid price and pre-established criteria.
- The Government may electronically transmit a Purchase Order to the winning contractor via their VAN. The Purchase Order is given standardized electronic formats and numbers (referred to as ANSI ASC X12 standards) so that the information is correctly interpreted by the Trading Partners.
- The contractor responds by transmitting a Purchase Order Acknowledgment.
- The contractor ships the product and transmits an Invoice document to the Government buyer.
- The Government buyer transmits a Payment Order document to DFAS after goods and/or services are received.

- DFAS transmits funds to the contractor by using Electronic Funds Transfer (EFT).

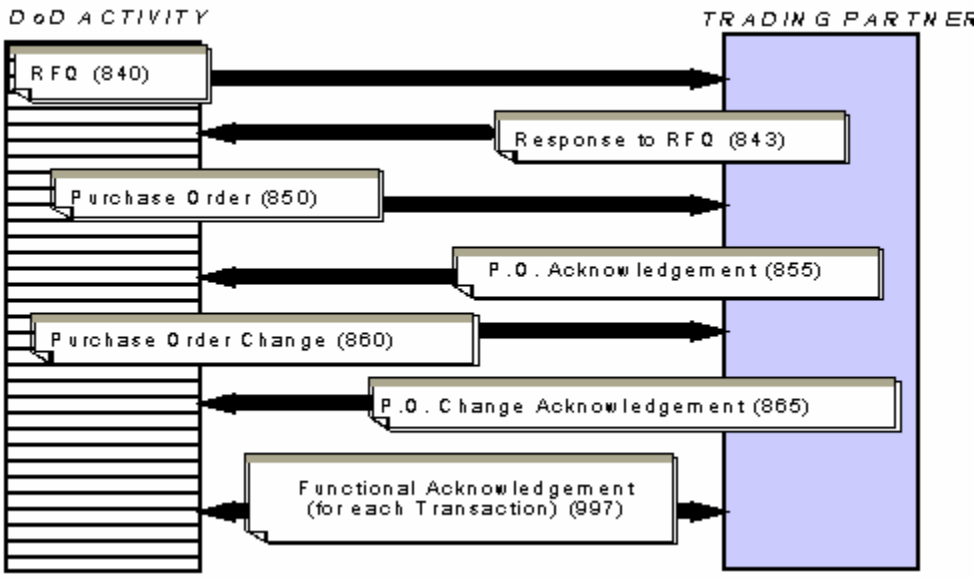
WHAT IS A VALUE ADDED NETWORK?

A Value-Added Network (VAN) is a third-party communications company that provides the skills and expertise to render EDI services such as electronic post offices; data translation; message storage, sorting, retrieval, etc., to registered Trading Partners. A VAN is often referred to as an electronic clearinghouse for data. A VAN is a third-party service provider that functions similarly to a long distance telephone company and/or a computer on-line service. VANs are discussed in greater detail in Chapter 5. A list of authorized Federal Government VANs is available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/vans.htm.

Although VANs can perform valuable services for you, DoD does not require the use of EDI, nor is a VAN needed to participate in many electronic commerce applications.

THE FLOW OF EDI DOCUMENTS

The figure below depicts the process of the exchange of electronic documents through EDI:



WHAT ARE THE OPTIONS FOR IMPLEMENTING EDI?

The options for implementing EDI depend on the number of expected monthly EDI transactions. However, before deciding to implement EDI, a Federal Government Trading Partner should do some research to learn if the Government has been purchasing their products or services with EDI. These statistics are available at some of the Web sites that offer Government EDI, such as http://www.softshare.com/ or http://www.simplix.com/.

If, after doing this research, the Trading Partner decides to implement EDI, there are two options. If there are business opportunities, but less than five a month, an inexpensive solution is to sign

up with an on-line service such as Bid-Search.com. No EDI software is required and typical costs are less than $20 per month.

Later, if bidding becomes more frequent, the Trading Partner may want to sign up with a VAN and install EDI software.

WEB INVOICING SYSTEM

In addition to traditional VAN-based EDI, DFAS has implemented a Web Invoicing System (WInS). WInS enables current paper-based vendors to send invoices electronically with little or no cost. Vendors enter their invoices into templates on a DFAS-owned Web server that processes and routes the invoices to the appropriate payment system. The vendor gains all the benefits of submitting their invoices electronically but eliminates the normal telecommunications cost associated with EDI. More information on WInS may be found at: http://www.dfas.mil/ecedi/.

WIDE AREA WORKFLOW – RECEIPTS AND ACCEPTANCE

Wide Area Work Flow-Receipts and Acceptance (WAWF-RA) is a paperless contracting DoD-wide application designed to eliminate paper from the receipts and acceptance process of the DoD contracting lifecycle. The goal is to enable authorized Defense contractors and DoD personnel to create invoices and receiving reports, and to access contract-related documents.

In the traditional DoD business method, three documents are required to make a payment: the contract, the receiving report, and the invoice. Each of these may arrive at the payment office separately - if they are paper. They are processed individually as they arrive. Information is then manually keyed in to the payment system. Using WAWF-RA, electronic documents are shared, eliminating paper and redundant data entry. Data accuracy is increased and the risk of losing a document is greatly reduced.

Other benefits of the WAWF-RA include:

Elimination of paper-based support functions. With the electronic capture, storage, and retrieval of required documents, the supporting infrastructure, which includes mail, file and copy room, and associated personnel, no longer needs to be maintained. It reduces operating cost.

Global accessibility. Multiple users are able to globally access documents, which streamlines processing, reduces the need for re-keying, improves accuracy, and provides real-time processing and access to document status. Users are able to search discrepancies, history, or status related to past payment, shipment, or invoices, without having to involve individuals from other organizations within the process. DoD contractors are able to submit their invoices electronically and to access contract payment records and status.

Accuracy of documents. Problems such as unmatched disbursement, duplicate payment, and payment delay are alleviated.

Secure and auditable transactions. Access to appropriate functions and documents is controlled through the user registration process. In addition, Public Key Infrastructure (PKI) certificates are used to verify user identification.

The contract is available through a seamless interface with an application called Electronic Document Access (EDA). Contractors have electronic options for submitting invoices and receiving documents. They can submit documents on the Web, through File Transfer Protocol (FTP), or through EDI.

Authorized DoD personnel receive notification electronically of pending actions and have a virtual folder of documents accessible. Digital signatures are used to authenticate the users and to digitally sign documents. In some cases, userid and password can be used in lieu of a digital signature. Visit the WAWF-RA Web site for additional information: https://rmb.ogden.disa.mil. Web-based training is also available at: http://www.wawftraining.com.

ELECTRONIC DOCUMENT ACCESS

Electronic Document Access acts as an electronic file cabinet for the storage and retrieval of contract documents used by multiple DoD activities. EDA replaces the paper process by providing a single, read-only, "electronic file cabinet" that can be accessed by any authorized user, both within DoD and in the vendor community. Vendors may be authorized to view only contract documents that match their validated DUNS or CAGE codes.

At the present time, the system provides storage and retrieval of post-award contracts, contract modifications, personal property and freight Government Bills of Lading (GBLs), vouchers, Contract Deficiency Reports (1716s), Summaries of Voucher Line Data (110 Reports), Materiel Acceptance and Accounts Payable Reports (MAAPRS), and Army direct vendor deliveries (DVDs) in a compressed text format running on DoD's private network. EDA capitalizes on communication networks and commercial tools that are widely used today. EDA provides payment technicians at the DFAS, DoD contract officers, procurement officers, and transportation technicians with the ability to view and process documents without paper copies. Vendors have view-only capability of their contract documents only. Additional information is available at the EDA website: http://eda.ogden.disa.mil.

ELECTRONIC FUNDS TRANSFER

Electronic Funds Transfer (EFT) is an EDI transaction that is already familiar to many people. The Debt Collection Improvement Act of 1996 requires payments on all Federal contracts to be made via EFT if the solicitation was issued after June 26, 1996.

In order to reduce the burden of registering with each DFAS payment office, effective June 1, 1996, all DFAS payment offices are using the EFT data provided in the CCR in order to issue EFT payments. Vendors are no longer required to complete EFT registration forms for each payment office from which they receive payments. When you register to do business with DoD using the CCR, you will be automatically enrolled in EFT.

HELP

For further questions and/or concerns, please contact:

Electronic Commerce Information Center (ECIC) at (800) 334-3414 (Monday – Friday, 8 a.m.- 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

CHAPTER FOUR
ELECTRONIC SOLICITATIONS

CHAPTER SUMMARY

This chapter provides information about Department of Defense (DoD) Business Opportunities (DoDBusOpps) and Electronic Bid Solicitation (EBS) processes. It explains how these processes work in DoD contracting.

DOD BUSINESS OPPORTUNITIES

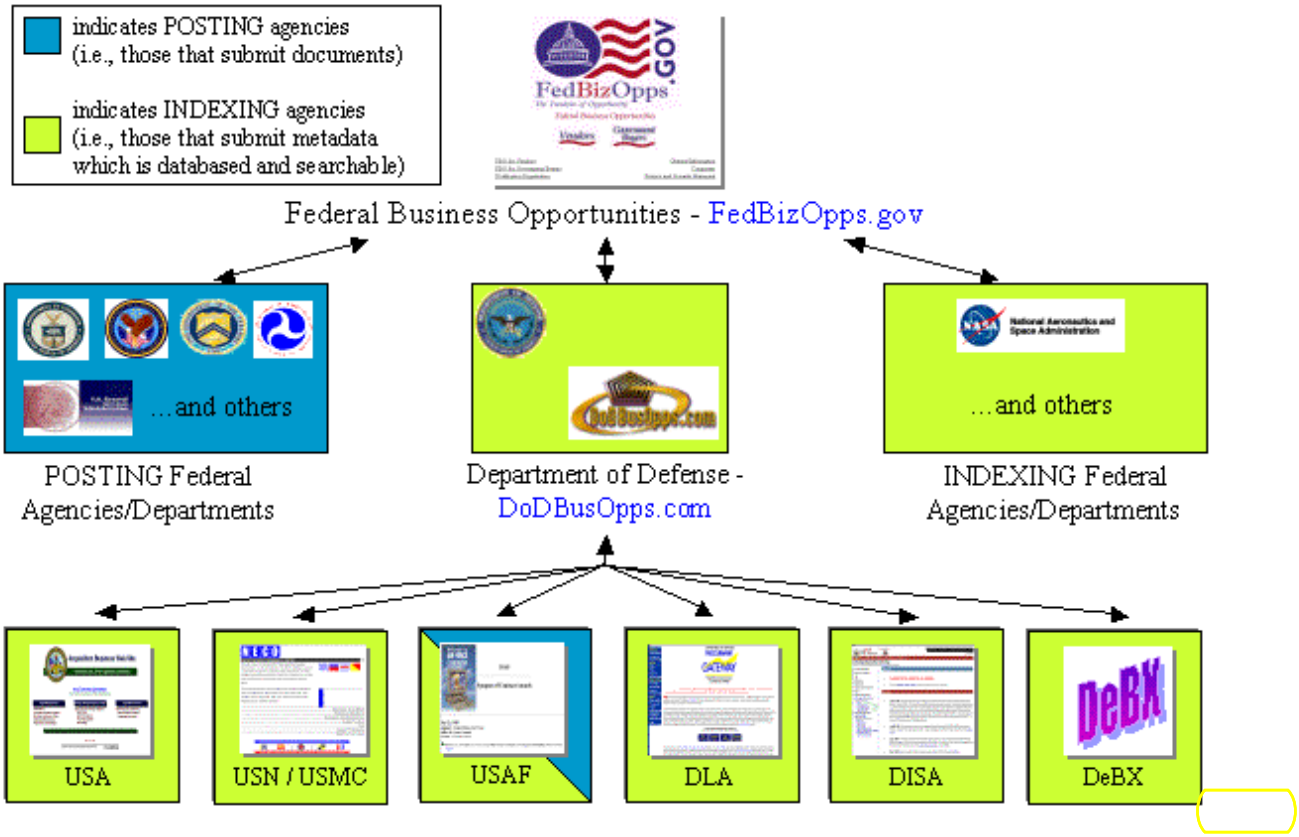
DoDBusOpps is a Web site created by the Defense Electronic Business Program Office and the DoD Electronic Contracting On-line Integrated Product Team (DECO IPT) to increase the visibility and accessibility of solicitations and to increase vendor competition for DoD business. DoDBusOpps provides direct links to over sixty sites within the Army, Air Force, Defense Information Systems Agency (DISA), Defense Logistics Agency (DLA), Navy, and Marines. The direct links also provide the Trading Partner with recent and accurate information on open DoD solicitations and opportunities.

The goal of the DoDBusOpps Web site is to provide a single entry point for users to identify business opportunities within the DoD Components in accordance with the FY98 National Defense Authorization Act and the Defense Reform Initiative. Users that are successful in searching for and locating desired solicitations will then be directed to access the appropriate DoD Component Web site to make offers on the specific solicitations. Additional information about DoDBusOpps is available at: http://dodbusopps.com.

The DoDBusOpps Web site has two main functions. First, using the Search Open Solicitations feature, a user can specify search criteria and conduct a search on all of the solicitations throughout the DoD. This "universe" of solicitations is created by all of the services funneling data on their solicitations to one main location at DoDBusOpps. Users can locate the desired solicitations and are then directed to the Service Web site where these solicitations are managed and maintained. There, users can download, make bids, and execute whatever steps necessary to acquire the business opportunities that exist.

The second feature that DoDBusOpps provides is a Search for Solicitation Web sites. There are numerous DoD Web sites that provide business opportunities and solicitations that are difficult to locate with commercial search engines. DoDBusOpps catalogs these sites and provides them to users in an easy-to-navigate directory-tree structure or a searchable database of indexed Web sites. Either way, users can gain access to the necessary pools of solicitation information rapidly and accurately.

As illustrated in the following figure, DoDBusOpps is based on a three-tiered pyramid model that collects solicitations from a vast array of DoD service and agency Web sites and makes them available to potential vendors. It also integrates its solicitation data with that of the General Service Administration's FedBizOpps, to assist in creating a single point of entry for solicitations throughout the entire Federal Government.



At DoDBusOpps, indexed information is entered into a database. Visitors can enter specific search criteria to locate solicitations hosted by individual DoD services and agencies. The site also provides links to technical data repositories, the Central Contractor Registration (CCR) and bidding modules at DoD component Web sites.

The DoDBusOpps Web site also contains a handbook entitled *Selling to the Military* at: http://www.acq.osd.mil/sadbu/publications/selling/index.html. This is a valuable resource to assist Trading Partners in finding opportunities within the DoD. The handbook provides Trading Partners with the information needed to maintain a competitive edge. The handbook assists with general ideas on how to begin the process and also includes a list of products and services keyed to particular major buying offices.

ELECTRONIC BID SOLICITATION

Electronic Bid Solicitation (EBS) is a process used to provide vendors the opportunity to bid on the procurement of major weapon systems. Potential bidders receive a CD-ROM from a Federal Government Agency, such as the Sacramento Air Logistics Center (SALC) or the Tank-Automotive and Armaments Command (TACOM), containing scanned (digitized) images of all documents necessary to prepare a quotation. The CD-ROM stores bid papers, drawings, required forms, and other electronic forms that are needed for the EBS process.

To respond to bids, the vendor must use proprietary software (often provided on CD-ROM) to open files, view the contents of the file, and print the documents.

Once the vendor has completed all the forms and bid papers, the bid is submitted on paper to the appropriate locations. A vendor may also choose to respond by fax and/or E-Mail. As stated in Chapter 1, E-Mail is the most frequently used application on the Internet, and may be used for a number of purposes. Using E-Mail within the EBS process is a concept geared to meet the demands of clients.

THE CD-ROM

The CD-ROM is a mass storage technology that can provide up to 650 MB of information storage on a single plastic disc, approximately 5 inches in diameter. CD-ROM is the same technology used in the audio and video CDs in the home.

Some advantages of using a CD-ROM are: (1) it is not as easily damaged or destroyed as magnetic media, such as floppy disks, since a magnet cannot erase it, and (2) it stores more information in less space than magnetic media.

THE FACSIMILE MACHINE

The Facsimile machine (fax) has been in use in the business environment since the 1970s. It was considered a revolution in the transfer of business documents across time and space. It has become an alternative to using postal services.

The fax machine is a device that digitizes a sheet of paper (a picture or business document), sends it over phone lines to a receiving machine, and prints the image on a piece of paper. The fax itself is nothing more than three devices in a single package: a communications modem, a scanner, and a printer.

When using the fax during the Electronic Commerce process, there are some disadvantages. Sometimes the process is slow, volume-sensitive, and the information received is not always legible by the end-user. Also, the information received is not digitally or electronically stored.

HELP

If you have any further questions and/or concerns, please contact:

Electronic Commerce Information Center (ECIC) at (800) 334-3414 (Monday – Friday, 8 a.m.- 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

CHAPTER FIVE
ELECTRONIC COMMERCE INTEROPERABILITY PROCESS

CHAPTER SUMMARY

This chapter presents an overview of the Electronic Commerce Interoperability Process (ECIP), which replaced the Value-Added Network (VAN) Licensing Agreements (VLA). This chapter defines and explains some of the terminology and concepts used for connecting to and operating on the Department of Defense (DoD) Electronic Commerce Infrastructure (ECI).

ELECTRONIC COMMERCE INFRASTRUCTURE

The ECI is a combination of software, hardware, and communication media components that support Electronic Commerce (EC). This infrastructure is used to communicate within DoD and with other Federal Government Agencies, as well as between the Government and the private sector. The ECI design is expected to be reviewed continually and revised as the proposed infrastructure is achieved, and demands for enhanced or additional functional and operational capabilities exceed the existing infrastructure. As new technologies impact the ECI design, improved methods will be incorporated into the infrastructure. As users become more experienced and demands increase for improved performance and/or additional capabilities, design upgrades will be made, as required.

ELECTRONIC COMMERCE INTEROPERABILITY PROCESS

Electronic Commerce Interoperability Process (ECIP) was developed to protect ECI, not to validate or certify the capabilities of ECI Providers. The ECIP has improved overall customer satisfaction among both commercial and Federal Government users of the Electronic Commerce Infrastructure (ECI). It emphasizes economic forces, customer requirements, and customer satisfaction as the primary determinants of the services and capabilities ECI Providers should render.

ECI Providers are Federal Government departments, services, Agencies; entities providing Gateway (GW) services to the Federal Government; commercial Value-Added Networks (VANs); or other entities transmitting, receiving, sorting, and providing access to EC/EDI messages and/or transactions via the DoD ECI commercial Trading Partners which may operate as ECI Providers on their own behalf, even if they do not intend to service other commercial Trading Partners. A current list of Federal Government VANs is available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/vans.htm.

To become an ECI Provider, applicants must successfully complete the Electronic Commerce Interoperability Process (ECIP) found at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/index.htm.

The first step in the process is to carefully review the Terms and Conditions, ECI Operating Characteristics, ECIP Guidelines, and the Interoperability Test Plan (ITP) to ensure that you are functionally and technically capable of successfully completing the entire process.

The Terms and Conditions are available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/terms.htm.

To review the ECI Operating Characteristics, visit: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/ecioc.htm.

The ECIP Guidelines are available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/ecip_guidelines.htm.

To actually start the process, all applicants must complete the Client Application Questionnaire (CAQ). When the CAQ is submitted, the applicant is deemed to have accepted the Terms and Conditions and agrees to operate on the ECI according to the procedures presented in the ECIP Guidelines. After the completed CAQ is submitted and reviewed, the applicant will be contacted by the ECIP Test Facility (ETF) to schedule testing in accordance with the ITP, which is administered by the Joint Interoperability Test Command (JITC). To review the Client Application Questionnaire, visit: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/caq.htm.

ECI PROVIDER SERVICES

Prior to purchase, careful consideration is essential when and if it becomes necessary to decide upon whether to use a VAN, or which VAN to use, when interoperating with the ECI. Each VAN is unique, offering various services and capabilities at different costs. Trading Partners should select a VAN that adheres to their business practices and that have business objectives that add value to the Trading Partner's own business objectives.

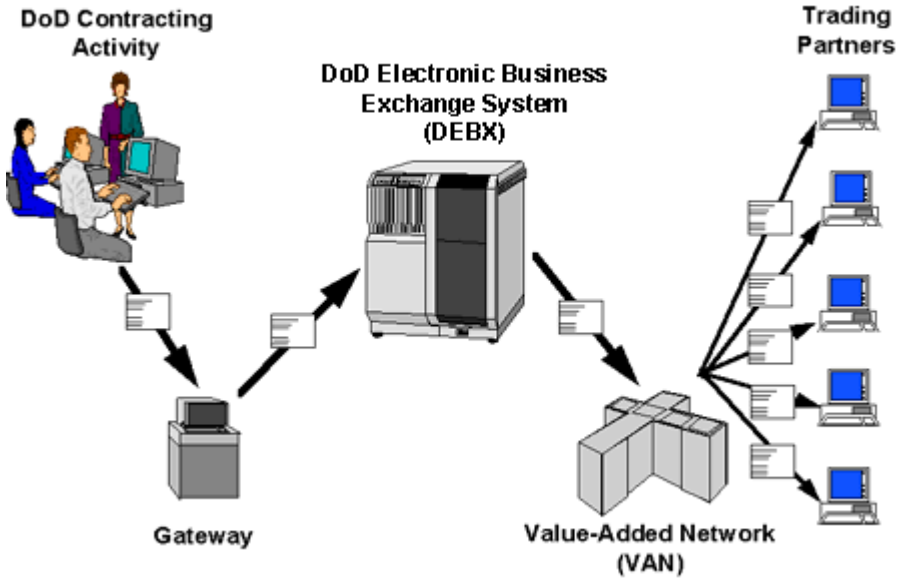
WHAT IS A VALUE-ADDED NETWORK?

A Value-Added Network (VAN) is a third-party communications company (ECI Provider) that provides the skills and expertise to render EDI services such as electronic post offices; data translation; and message storage, sorting, retrieval, etc., to customers (usually called registered Trading Partners). A VAN is often referred to as an electronic clearinghouse for data -- a third-party service provider that functions similarly to a long distance telephone company and/or a computer on-line service. A current list of authorized Federal Government VANs is available at: http://www.defenselink.mil/acq/ebusiness/policy/ebusiness/vans.htm. Visit their individual Web sites for a list and description of the services offered by each.

WHAT IS A TRADING PARTNER?

A Trading Partner is an organization or individual with whom information or data is accessed or exchanged. The term Trading Partner includes private industry, academia, and Federal Government entities. In the context of this document, a Trading Partner is any business that has registered with the Central Contractor Registration (CCR) and conducts business electronically with the Government.

The figure below depicts how Trading Partners retrieve electronic documents.



VAN ADVANTAGES

Most VANs offer service 24 hours a day, 7 days a week, and can do the following:

- Provide access to Federal Government Agencies with one toll-free or local call;
- Serve as an electronic mailbox where messages are forwarded, routed, and stored;
- Grant access, regardless of physical location, at any time of the day or night;
- Supply reliable connections to Trading Partners using communication speeds and protocols;
- Provide security and technical support for transactions, including audit trails;
- Offer additional Value-Added Services (VAS), such as translation and archiving.

CHOOSING A VAN FOR DOD CONTRACTING

In evaluating VANs, the following factors should be considered:

- Communication speeds and protocols supported;
- Fixed cost for basic services and additional costs for other services;
- Data backup and recovery services offered;
- Data security features;
- Transmission status reports and usage accounting data;
- Transaction filtering (so you only receive solicitations in which you are interested);
- Activities and Web sites it monitors for RFQs;
- ANSI ASC X12 standards compliance;
- Additional Value-Added Services (VAS) offered.

SOFTWARE COMPATIBILITY

It is important to research the services that the VAN will provide. It is extremely important to research the software packages that the VAN will support. Some VANs work only with software that they supply. Other VANs work with a specific list of translation software packages, and a few VANs work with almost any translation software package. Many VANS now operate in an Internet environment using Web browsers.

For newcomers or novices doing business electronically, especially with DoD, consider getting VAN service and EC software from the same provider. Many VANs offer both VAN services and software.

COSTS

Currently, there are two types of cost schedules available for VAN services: fixed and variable. A fixed cost schedule sets a predetermined price for VAN services, regardless of the transaction volume that passes through the VAN. On a variable cost schedule, a Trading Partner pays for each transaction. This cost is usually determined by the number of "electronic envelopes" sent and the number of characters sent in each transaction.

Compare the prices of the VANs and analyze the volume of transactions to help determine which cost schedule would be most beneficial.

VALUE-ADDED SERVICES

A Value-Added Service (VAS) provider, sometimes known as an EDI Service Bureau, offers additional services. Some VANs also provide these services.

Value-Added Services include:

- Alternative delivery methods for non-EDI enabled firms, such as EDI-to-FAX;
- Assistance in identifying Agencies which purchase your firm's goods or services;
- Profiling of procurement opportunities -- new RFPs/RFQs/IFBs are screened against a customized profile of your firm's products and services;
- Access to competitive intelligence databases that include details of Federal Government specifications, purchase histories for a given product/service, etc.

HELP

If you have any further questions and/or concerns, please contact:

Electronic Commerce Information Center (ECIC) at (800) 334-3414 (Monday – Friday, 8 a.m.- 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

CHAPTER SIX
REGISTERING WITH THE CENTRAL CONTRACTOR REGISTRATION

CHAPTER SUMMARY

This chapter provides information on how to register with the Department of Defense (DoD). It also explains the purpose and benefits of registration, and the importance of the registration process.

REGISTERING WITH THE CENTRAL CONTRACTOR REGISTRATION

The purpose of registering with the Central Contractor Registration (CCR) is to allow a vendor to register once to do business with DoD or any other Federal Agency that uses the CCR. Complete information on how to register can be found at: http://www.ccr.gov/handbook.pdf.

A vendor is only required to register in the database once, with the subsequent requirement of annual updates. Registering with CCR automatically registers a company with every Defense Agency. The CCR is the single source from which the DoD receives business information on all contractors in order to improve accuracy of vendor information on contracts and to expedite invoice payments using Electronic Funds Transfer (EFT) processes.

The CCR is a centralized database and application suite that records, validates, and distributes specific data about Federal Government and commercial Trading Partners. The CCR database creates an accurate business profile for vendors that have registered and wish to do business with the DoD. It is the responsibility of the vendor to submit accurate information, to keep it up to date and to renew registration annually.

WHY REGISTER?

The DoD requires vendors to register with the CCR prior to awarding any contracts, basic agreements, basic order agreements, blanket purchase agreements, and payment of goods and/or services.

BEFORE REGISTERING

Before registering with the CCR, the following will be needed:

- Data Universal Numbering System (DUNS) number
- Commercial and Government Entity (CAGE) code (mandatory for foreign vendors)
- Taxpayer Identification Number (TIN)
- Standard Industrial Classification (SIC) code
- North American Industrial Classification System (NAICS) code
- Finance and banking information

The Data Universal Numbering System (DUNS) number is a unique nine-digit company identification number. To obtain a DUNS number, call Dun & Bradstreet (D&B) at

(800) 333-0505 or visit their Web site at: http://www.dnb.com. The process takes about ten minutes and is free of charge. If a company already has a DUNS number, the D&B representative will advise you over the telephone. Companies can add four additional alphanumeric characters of their choice to their DUNS number to identify additional records at the same physical location in CCR, to establish different EFT payment addresses. These four alphanumeric identifiers are assigned and maintained by the parent company NOT D&B.

The Commercial and Government Entity (CAGE) Code is a five-character ID number used extensively within the Department of Defense. Vendors with a U.S. address may submit the CCR application without a CAGE Code if they do not have one. If the application does not contain a CAGE Code, one will be assigned. The CCR registration process will also verify existing CAGE Codes for all applicants. To speed up the process, make every effort to use a current CAGE Code in the application. You must have a separate CAGE Code for each physical location and separate division at the same physical location. Each separate CCR registration must have its own CAGE Code. If you think you have a CAGE Code, search the DLIS CAGE Web site at https://www.dlis.dla.mil/CAGESEARCH/. Foreign vendors must include a North Atlantic Treaty Organization (NATO) CAGE (NCAGE) Code on the registration or it will be considered incomplete.

The Tax Identification Number (TIN) is either the Employer Identification Number (EIN) issued by the Internal Revenue Service (IRS) or your Social Security Number (SSN). Check for the TIN with your accounting, payroll, and/or personnel department. The IRS can also be contacted at (800) 829-1040 to verify the TIN. If operating as an individual/sole proprietorship, you must use the number under which you file taxes. If your taxes are paid by a parent company, indicate the parent company's TIN.

The North American Industrial Classification System (NAICS) and Standard Industrial Classification (SIC) codes are parts of numbering systems that identify the type of products and/or services the company provides. The NAICS codes are intended to replace SIC codes. Online search engines based on keyword descriptions are available. NAICS codes are located at: http://www.census.gov/epcd/www/naics.html. SIC Codes are located at: http://www.osha.gov/oshstats/sicser.html. Applicable NAICS and SIC Codes can also be obtained from a Procurement Technical Assistance Center (PTAC) located in the relevant state. The PTACs are listed at: http://www.dla.mil/db/procurem.htm. A minimum of one NAICS code and one SIC code must be listed in CCR.

HOW TO REGISTER WITH CCR

The following are options for registering with the CCR.

(1) Register Using the Internet:

Register over the Internet by completing an electronic application at the CCR Homepage: http://www.ccr.gov/.

We recommend that you first download the instructions and forms for registration and review them before you begin to enter the data online. This will ensure that you have all the required business information on hand so you can submit a complete application online.

(2) Register Via Fax or Mail:

Complete the paper registration form and mail or fax the application to the CCR Assistance Center. You can access the paper CCR form and associated workbook from: http://www.ccr.gov/.

To check the status of your registration, you can go to the CCR Web site, click on the "Search CCR" icon, and enter the appropriate DUNS Number.

The CCR Assistance Center can be contacted at the following address:

Department of Defense
Central Contractor Registration Assistance Center
74 Washington Ave North, Suite 7
Battle Creek, Michigan 49017-3084
Phone: (888) 227-2423
Fax: (616) 961-7243

AFTER REGISTERING

After your registration application is submitted and the information has been validated, you will receive a confirmation letter with your CAGE Code. A separate letter containing your confidential Trading Partner Identification Number (TPIN) will also be mailed to you. The letters will confirm that registration was successfully completed and that you can begin to conduct business with the Government. You need your TPIN to change, renew, or cancel existing registration information. Please safeguard the confidentiality of your TPIN. If you misplace your TPIN and/or CAGE Code, you should call the Defense Logistics Information Service (DLIS) at (888) 352-9333.

SECURITY

Registration information is accessible to DoD and Federal Civilian Agencies and other authorized agents for purposes of doing business with firms that are registered. The CCR does not publicly release information specific to the business income, financial institution, financial accounts, or other similar confidential information.

Particularly sensitive data, such as bank account information used for Electronic Funds Transfer (EFT), is available only to you, your VAN (if applicable), the Defense Finance and Accounting Service (DFAS), and other authorized Federal Government Agencies. Freedom of Information Act (FOIA) data, such as company name, address, NAICS, SIC, and DUNS numbers can be viewed in the public query. Your entire registration can be seen only by appropriate Government users with a password and user ID, and by you after you have entered your DUNS and TPIN.

OTHER RESOURCES

In addition to CCR, small businesses may wish to register with PRO-Net, an electronic gateway operated by the Small Business Administration (SBA). It is an Internet-based database of information on more than 195,000 small, disadvantaged, 8(a), and woman-owned businesses. It

is a free search engine for Federal and State Government Agencies, as well as prime and other contractors seeking small business contractors, subcontractors, and/or partnership opportunities. PRO-Net is available to all small firms looking for business opportunities with Federal, State, and other contractors. PRO-Net also provides a link to your home page. It is therefore advantageous for your company to have a Web site. Additional information on PRO-Net is available at: http://pro-net.sba.gov/index2.html.

The General Services Administration's (GSA's) Office of Enterprise Development is another resource for small businesses. Its mission is to promote increased access to GSA's nationwide procurement opportunities. It can be found at: http://www.gsa.gov/Portal/content/orgs_content.jsp?contentOID=22882&contentType=1005&P=1&S=1.

HELP

For further questions and/or concerns, please contact:

CCR Assistance Center at (888) 227-2423 (Monday – Friday, 8 a.m.- 6 p.m. EST)

or

Electronic Commerce Information Center (ECIC) at (800) 334-3414
(Monday – Friday, 8 a.m. – 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

CHAPTER SEVEN
HOW TO SELL GOODS AND SERVICES TO GOVERNMENT AGENCIES

CHAPTER SUMMARY

This chapter outlines different ways to sell goods and/or services to the Federal Government.

FEDERAL CONTRACTING

DoD accounts for the majority of the contracting dollars spent each year by the Federal Government on the procurement of goods and services. Nearly 98% of DoD's purchase transactions are for $25,000 or less but they total less than 20% of DoD's procurement dollars. The total dollar value is in the hundreds of billions of dollars.

The basic contracting rules for all Federal Government Agencies are set forth in the Federal Acquisition Regulations (FAR). Additional rules unique to DoD are found in the DoD FAR Supplement (DFARS).

There are two ways in which small businesses can participate. The first is to be a prime (direct) contractor to the Government. The second is to subcontract to another vendor. Quite often, large Federal contracts contain provisions requiring the prime contractor to subcontract certain specified percentages to small, minority-owned, woman-owned, 8(a), and veteran-owned companies.

All Federal Agencies are required to establish goals for awarding contracts to small firms. These goals are negotiated with the Small Business Administration (SBA) annually. To meet these goals, Agencies apply a variety of small business preference programs, including Small Business Set-Asides.

ACQUISITION METHODS

There are different kinds of purchases made by DoD that can be categorized by the dollar amounts associated with them, and the rules that each has to follow.

The Federal Acquisition Streamlining Act of 1994 (FASA), Public Law 103-355, mandated the establishment of a Federal Acquisition Computer Network (FACNET) architecture to enable Federal Agencies and vendors to do business electronically in a standardized fashion. This event was the culmination of an Executive Memorandum signed by President Clinton on October 26, 1993. That memorandum, entitled "Streamlining Procurement Through Electronic Commerce (EC)", directed the Executive Agencies to fundamentally alter and improve the method by which they acquired goods and services. FACNET was intended primarily for purchases valued above the micro-purchase threshold ($2,500) up to the simplified acquisition threshold (currently $100,000). In the time since FASA was passed, rapidly changing technology has made available alternative electronic purchasing methods. In response to these changes, the Department of Defense (DoD) Authorization Act for FY 1998 was executed in November 1997. It included a provision that eliminated total reliance on FACNET and allowed alternative means of implementing EC to be pursued.

At about the same time the Authorization Act was executed, the Secretary of Defense released his Defense Reform Initiative (DRI) Report. The DRI Report was a resounding endorsement of EC and related technologies that will allow the DoD to significantly reduce paperwork and realize much greater efficiencies and economies in all functional areas, such as Logistics, Acquisition, Finance, Medical, Transportation, etc. Moreover, the report set forth a management structure for EC that was formally established by the Deputy Secretary of Defense on May 20, 1998. Defense Reform Initiative Directive (DRID) #43 – Defense-wide Electronic Commerce (EC), directed the establishment of a Joint Electronic Commerce Program under the policy direction of the DoD Chief Information Officer (CIO). This complemented the CIO role of providing information technology (IT) oversight and policy direction to the functional OSD Principal Staff Assistants (PSAs) and Defense Components. The assignment of EC policy and oversight to the CIO also established a focal point with the goal of promoting EC and business process change throughout all functional areas of the Department. The DRID also designated the Joint Electronic Commerce Program Office (JECPO), as the primary entity to integrate EC in the full DoD business cycle and to manage the DoD EC Program. In 2001, the JECPO changed its name to the Defense Electronic Business Program Office, to reflect the intent of the DoD to develop an enterprise-wide electronic environment, and to recognize the ongoing expansion from electronic commerce to electronic business.

Anyone with past experience in government contracting knows how inefficient and manpower-intensive the process used to be. The General Services Administration (GSA) estimates that the Federal Government is now saving $54 for every transaction that is done electronically versus on paper.

Simplified Acquisition Procedures (SAP) are streamlined techniques and guiding principles designed to reduce the administrative burden of awarding the lower dollar value procurements that account for the vast majority of DoD Acquisitions. They allow informal quoting and competition procedures, encourage acceptance of oral quotes versus written quotations, prefer the comparison of quoted prices versus conducting negotiations, and provide streamlined clauses to support the award document.

Saving money, improving opportunity and efficiency, and avoiding administrative burden is at the core of simplified acquisition procedures. Using Electronic Commerce will further streamline the acquisition process by ensuring that industry has better access to Federal Government contracting opportunities while shortening procurement lead time. The "Competition in Contracting Act" (CICA) provided a legal exemption to 10 USC 2304(g) from using "formal contracting procedures" to procure requirements under $25,000. The Federal Acquisition Streamlining Act (FASA) and the Federal Acquisition Reform Act (FARA) subsequently provided further changes to what became known as "simplified acquisitions" and the "simplified acquisition threshold" (SAT) of $100,000; created a sub-category referred to as micro-purchases (purchases under $2,500); created a small business reservation which requires the contracting officer to restrict solicitations exclusively to small businesses on action between $2,500 and $100,000; and allowed for options and "best value" criteria in simplified acquisition.

Simplified Acquisition Award Methods. There are four (4) methods for making awards using "simplified acquisition procedures". They are:

(1) The Government-wide Purchase Card for actions under $2,500;
(2) Blanket Purchase Agreements;
(3) Purchase Orders (using the DD Form 1155);
(4) Letters of Agreement; and
(5) Use of the SF 1449 in conjunction with the purchase of "commercial items".

Micropurchases. The only thing you need to sell a micro-purchase to a Federal Government buyer is the ability to process credit card transactions. There is no requirement to register in the Central Contractor Registry (CCR). (For prime (direct) contracts involving larger dollar amounts, CCR registration is required.) It may surprise you to learn that a large number of Federal Government purchases are made using familiar VISA and MasterCard credit cards.

One benefit of the Purchase Card program for vendors is that it can significantly shorten the payment cycle that sometimes causes cash flow problems for small businesses.

The Government-wide Commercial Credit Card is an internationally accepted VISA or MasterCard credit card, which allows a cardholder to make small purchases under an established Delegation of Authority. It is used primarily for micro-purchases (requirements under $2,500). It is used for official Federal Government purchases only, and may be used for either goods or services. The Government Purchase Card is playing a key role in the drive to streamline the Federal Acquisition Process. It provides DoD Military and Civilian personnel with the authority to purchase their own small dollar ($2,500 and less) commercial supplies and services without having to go through a contracting office. Commercial vendors are saving money as well. When the card is used for purchasing, the vendor does not have to submit invoices and wait the usual 30 days for payment. With the purchase card, vendors are paid within 72 hours. If your company already accepts credit cards, transaction procedures are identical. If your company does not currently accept credit cards, contact your local bank or financial institution. Once your application is complete, it takes about 21 days to begin accepting transactions.

As with all credit card transactions, there is a fee assessed to the merchant when cards are used. Cost is based on the volume of your card business and the average size of your transactions. Rates are competitive so be sure to shop around for the lowest fee possible. (Source: DoD 4205.1 Handbook, "Selling to the Military", November 2000, http://www.acq.osd.mil/sadbu/publications/selling/index.html).

Payment for transactions under $2,500 should be by purchase card. The purchase card should also be used as a payment vehicle for goods and services above the micro-purchase ($2,500) level if an existing contract vehicle is already in place, and the contract authorizes the purchase card for payment. (Source: Simplified Acquisition Procedures (SAP), http://www.acq-ref.navy.mil/tools/turbo/topics/be.cfm)

Medium-sized. Advertised by various means, the dollar value of this type of acquisition dictates the method of soliciting/advertising that must be used. FACNET is the preferred method of advertising simplified acquisitions. However, if FACNET is not available or a written determination has been made that it is not practical or cost-effective to use, the following solicitation procedures should be used:

Actions $2,500 to $25,000 should be solicited orally whenever possible;

Actions $10,000 to $25,000 which are solicited in writing will be posted in a public place. (Source: Simplified Acquisition Procedures (SAP), http://www.acq-ref.navy.mil/tools/turbo/topics/be.cfm)

These medium-sized opportunities are often the hardest to find. There are some DoD and Federal solicitation Web sites where these opportunities can be found. Many individual commands host local bulletin boards where these types of solicitations can also be found.

Large purchases. Purchases of $25,000 and up must be synopsized in the Government Point of Entry (GPE) at FedBizOpps, located at: http://www.FedBizOpps.gov. Contracting Officers are required to establish a "reasonable response time", having considered the complexity of the item and the amount of time the contractors need to respond to the notice. More information on large purchases may be found at: http://www.acq-ref.navy.mil/tools/turbo/topics/be.cfm.

Large business firms receiving DoD construction contracts in excess of $1,000,000, or other contracts in excess of $500,000 offering subcontracting possibilities, are required to establish plans for subcontracting to small and disadvantaged business. These contractors must designate a small business liaison officer to administer these plans. DoD annually publishes "Subcontracting Opportunities with DoD Major Prime Contractors", which lists all these prime contractors, their product lines, and the names and telephones numbers of their small business liaison officers. (Source: DoD 4205.1 Handbook, "Selling to the Military", November 2000, http://www.acq.osd.mil/sadbu/publications/selling/index.html)

Subcontract awards don't require CCR registration. In these awards, you are doing business with another contractor, rather than directly to the Federal Government, so different rules apply.

Small and Disadvantaged Businesses. These types of contracts are often not advertised electronically. The DoD Small and Disadvantaged Business Utilization Office (SADBU) on military installations have some leeway in how they can award these contracts, particularly when the award involves an 8(a) firm. If your company falls into this category, it might be worthwhile to try to meet with the SADBU officers on the bases in your area, to learn what procedures they use to advertise and award contracts. The DoD SADBU provides additional information in support of small businesses as well as general information on Federal Government contracting. For additional information, visit the DoD SADBU Web site at: http://www.acq.osd.mil/sadbu/. Another source of information is the DoD Directive 4205.1 for "Selling to the Military", found at: http://www.acq.osd.mil/sadbu/publications/selling/.

This is an overview of how the DoD procurement cycle works for large purchases:

- It begins with a **Requiring Activity** needing some good or service.

- The **Requiring Activity** submits a requisition to the **Contracting** Office.
- The **Contracting** Office posts a synopsis at the Government Point of Entry (GPE) on FedBizOpps.
- The **Contracting** Office sends out a Request for Proposal (**RFP**), which is distributed to **Vendors**.
- **Vendors** submit bids to **Contracting** in the form of official **Proposals**, in the format prescribed in the **RFP**.
- A **Contract** is negotiated between **Contracting** (specifically, the Procurement Contracting Officer (PCO)) and the selected **Vendor**.
- Once the **Contract** is signed by the pertinent parties, it is distributed to various users throughout the DoD to include the payment office (Defense Finance and Accounting Service (**DFAS**)) and the Agency that performs inspection and acceptance of goods and services (generally Defense Contract Management offices).
- When the **Vendor** ships goods or services, they submit an invoice to **DFAS** and a receiving report to the **inspector/acceptor**.
- The **inspector/acceptor** signs the receiving report indicating that the goods or services have been inspected and accepted for the Government.
- **DFAS** compares the contract, invoice, and receiving report, and makes payment.

Over the past few years, DoD has been taking pieces of this process and converting them from paper processes into electronic processes. Most of this entire process can now be done electronically.

OTHER RESOURCES

The Defense Logistics Agency (DLA) administers the Procurement Technical Assistance Cooperative (PTAC) Agreement Program under which PTACs provide assistance to businesses seeking contracting opportunities. PTACs provide detailed information on how to obtain and perform contracts with Federal, State and local Governments. A list of PTACs and the regions they serve may be found at: http://www.dla.mil/db/procurem.htm.

Federal Agencies now use the Internet in a number of ways for purposes of procurement. Other Web sites that may be of interest include:

- Army Single Face to Industry (ASFI) Acquisition Business Web Site: http://acquisition.army.mil/default.htm
- Defense Contract Management Agency (DCMA): http://www.dcma.mil/
- Defense Information Technology Contracting Organization (DITCO) Contracting Opportunities: https://www.ditco.disa.mil/dcop/public/asp/dcop.asp
- The Defense Logistic Agency's
  - Defense Supply Center Philadelphia (DSCP): http://www.dscp.dla.mil/
  - Defense Supply Center Richmond (DSCR): http://www.dscr.dla.mil/
  - Defense Supply Center Columbus (DSCC): http://www.dscc.dla.mil/
  - Defense Reutilization and Marketing Service (DRMS): http://www.drms.dla.mil/
- Department of Defense Procurement Gateway: http://progate.daps.mil/home/

- The Department of Justice's UNICOR Federal Prison Industries On-line Shopping Catalog: http://www.unicor.gov/
- GSA's Advantage!: http://www.gsaadvantage.gov/
- NASA's Government-Wide Massbuy Contracts Homepage: http://genesis.gsfc.nasa.gov/nasa/adpmass.htm
- Naval Inventory Control Point (NAVICP): http://www.navicp.navy.mil/
- The Navy's Electronic Commerce On-line (NECO): http://www.neco.navy.mil/
- The Office of Federal Procurement Policy (OFPP)'s ARNet: http://www.arnet.gov/.

HELP

For further questions and/or concerns, please contact:

Electronic Commerce Information Center (ECIC) at (800) 334-3414 (Monday – Friday, 8 a.m.- 6 p.m. EST) or by E-Mail at dlis-support@dlis.dla.mil.

Appendix A

INTERNET TECHNOLOGY

THE INTERNET

The Internet is a centralized communication tool that links millions of computers to a network integrator. The Internet assists computers with the function of exchanging information with different sources.

Originally funded by the Department of Defense (DoD) and the National Science Foundation (NSF), the Internet is operated by thousands of institutions. Once the exclusive domain of researchers and academic studies, the Internet is becoming more popular than the global telephone network in its scale, economic importance, and daily use.

A single administrative body does not control the Internet. It is, however, supported by an aggregation of schools, corporations, Federal Government Agencies, and other organizations that share the Internet's resources.

ELECTRONIC MAIL

Electronic Mail (E-Mail) is the most frequently used application on the Internet. Many people have access to the Internet at school, home, and/or work. They use the Internet to send and receive E-Mail messages.

Sending E-Mail messages is fast and easy. Log on to the E-Mail Service Provider, create the message, and then click send. The message goes to the designated Internet Service Provider (ISP), which in turn sends the message to the recipient's mail server. On the way, the message may go through several servers, each reading the domain name in order to route it to the recipient's server.

The main benefits of E-Mail are:

- Ease and speed of message transmission;
- Ability to send messages worldwide;
- Ability to duplicate and send messages to several parties at one time;
- Ability to incorporate files from different software packages for the recipient to view;
- Ability to respond quickly to urgent messages;
- Virtual elimination of paper.

There are several Web sites you can visit to locate an E-Mail address. These sources include Bigfoot, Yahoo! People Search, and Netscape's E-Mail Directories.

Both Netscape and Explorer browsers include E-Mail features. There are several free E-Mail programs available over the Internet, including Qualcomm’s Eudora Lite and MSN’s Hotmail.

THE WORLD WIDE WEB

The World Wide Web (known as “WWW”, “Web”, or “W3”) is an Internet client-server system that distributes information. Created at the European Organization for Nuclear Research (CERN) in Geneva, Switzerland in 1991, the World Wide Web was born when researcher Dr. Tim Berners-Lee originated the hypertext transfer protocol (HTTP) on which the Web is based.

HTTP is the World Wide Web protocol that consists of moving hypertext mark-up language (HTML) files across the Internet and is the coding language to create hypertext documents on the World Wide Web. HTML is a way to format text by placing marks ("tags") around the text (like old-fashioned typesetting code).

The universe of network-accessible data is based on a standard three-part model of client, content, and server. In this model, a client and a browser (for example, Netscape or Explorer) connect to a remote machine and server. The server's content will have a variety of files, or Web sites, that can be viewed by using the Universal Resource Locator (URL). A URL is the Internet address for a Web document or other files. A typical URL looks like this: `http://www.defenselink.mil/acq/ebusiness/index.htm.`

To read a brief history of the World Wide Web visit: http://www.w3.org/History.html.

OTHER SERVICES ON THE INTERNET

In addition to E-Mail and the World Wide Web, the Internet offers several other services:

File Transfer Protocol (FTP) is one of the workhorse protocols of the Internet. It works behind the scenes to transfer files between computers. It is made up of different series of commands that allow your computer to connect to a distant computer, get a directory listing, and transfer the files between the two computers.

Telnet is for those who would rather type at the keyboard than use the graphical interface of the Web. Once Telnet is used to reach a remote computer, the user operates at the command prompt and must know the command syntax of the remote computer.

Newsgroups are services that use E-Mail to post messages to a central server. They are then broadcast to anyone requesting them. Newsgroups are sorted into topics of interest.

Appendix B

GLOSSARY

ACH: See *Automated Clearing House*.

American National Standards Institute (ANSI): Parent organization of ASC XI2. ANSI is the coordinator and clearinghouse for standards in the United States.

ANSI ASC X12: American National Standards Institute Accredited Standards Committee X12. This committee develops and maintains U.S. standards for Electronic Data Interchange (EDI).

Archive: To store data for a given period of time for security, backup, or auditing.

American Standard Code for Information Exchange (ASCII): A 7-bit code with an 8th bit used for parity. The term is used to describe the format for transmission and for storage of data.

ASCII: See *American Standard Code for Information Exchange*.

Asynchronous Communication: An electronic communication method where data is sent one character and one direction at a time, most commonly used in a PC environment.

Audit Trail: Manual or computerized recording of transactions affecting the contents or origin of a record.

Authentication: A security measure that verifies that an EDI message was not tampered with or altered during transit.

Automated Clearing House (ACH): A network of financial institutions providing electronic funds transfer services.

Bar Code: An array of rectangular marks and spaces in a predetermined pattern. Usually used for automatic product identification.

Batch Processing: A type of data processing operation and data communications transmission where related transactions are grouped together and transmitted for processing, usually by the same computer and under the same application.

Baud or Bits per Second (BPS): The rate at which data is transmitted. Commonly used rates are 9,600, 14,400 and 28,800 baud or BPS.

Bisynchronous Communications: An electronic communications method in which data is sent in blocks of characters and in both directions at the same time, most commonly used by mainframes, but available for the PC.

Bit: Binary digit (0 or 1), the smallest component of information stored or transmitted by a computer.

BPS: See *Baud or Bits per Second*.

Business Application: A computer-based system that processes business information in support of a specific business function such as purchasing, accounting, logistics management, etc. Business application data is produced by such applications and transmitted to a translation program for conversion into ANSI X12 formats and vice versa.

Byte: Size of memory space needed to store a single character, which is usually 8 bits. A computer's memory size is measured in kilobytes (KB) where 1 KB is equal to 1,024 bytes.

CAGE Code: See *Commercial and Government Entity Code*.

CCR: Central Contractor Registration.

Commercial and Government Entity (CAGE) Code: Unique five-character company identification number issued by the Defense Logistics Information Service (DLIS) to identify DoD contractors. It is automatically assigned and validated in the registration process.

Character: Standard bit representation of a symbol, letter, number, or punctuation marks; generally means the same as a byte.

Communications Protocol: Communications standards based upon which two computers coordinate the exchange of data.

Communications Software: A software program that controls computer hardware and modems and arranges for the transmission or reception of electronic data.

Compliance Checking: A checking process that is used to ensure that a transmission complies with syntax rules.

Control Characters: In communications, any transmitted characters used to control or facilitate data transmission between two or more computers. Also, characters associated with addressing, polling, message delimiting and blocking, framing, synchronization, error checking, and other control functions.

Control Structure: The beginning and end (header and trailer) segments for entities in Electronic Data Interchange.

Data Element: The smallest meaningful piece of information in a business transaction. A data element may condense lengthy descriptive information into a short code. Equivalent to a data field in a paper document; a series of data elements is used to build a data segment. A data element dictionary that defines the data element and the code, where appropriate, is part of ASC X12 standards.

Data Element Delimiter: A separating character, such as an asterisk (*), that precedes each data element within a segment.

Data Element Dictionary: The publication that lists all of the data elements used within EDI standards.

Data Element Reference Number: The number that identifies each element in the segment diagram with its corresponding definition in the data dictionary. Also known as a data element number.

Data Interchange Standards Association, Inc. (DISA): The Secretariat for ASC X12 to ANSI. It administers ASC X12 membership, ballots, standards development, publications, and communicates for the X12 Committee.

Data Segment: A group of related data elements in a transaction set. Each segment has a unique segment identifier, a combination of two or three uppercase letters and/or digits that serves as a name for the segment and occupies the first character positions of the segment. A segment is equivalent to a data record in a database.

Data Segment Dictionary: The publication that shows the format of all the segments in the standard.

Data Universal Numbering System (DUNS) Number: A unique nine-character company identification number issued by Dun & Bradstreet Corporation.

DEBX: See *Defense Electronic Business Exchange*.

Defense Electronic Business Exchange (DEBX): A collection of hardware and software systems which provide communication connectivity between ECI Providers, VANs, and the Government Gateways to support the exchange of EC transactions between Federal Government procurement Agencies and private sector Trading Partners.

Digital Signature: See *Electronic Signature*.

DISA: See *Data Interchange Standards Association, Inc*.

Draft Standard for Trial Use (DSTU): Proposed transaction set within ANSI ASC X12 that remains in draft form until approved through a balloting process.

DSTU: See *Draft Standard for Trial Use*.

DUNS: See *Data Universal Numbering System*.

EB: See *Electronic Business*.

EC: See *Electronic Commerce*.

ECAT: See *Electronic Catalog*.

ECI: See *Electronic Commerce Infrastructure*.

ECIP: See *Electronic Commerce Interoperability Process*.

EDI: See *Electronic Data Interchange*.

EDIFACT: See *Electronic Data Interchange for Administration, Commerce, and Transportation*.

EFT: See *Electronic Funds Transfer*.

Electronic Business (EB): The application of Electronic Commerce techniques and solutions to the business processes of the DoD to include the entire range of the DoD functional areas.

Electronic Catalog (ECAT): An Internet-based entity that allows Agency buyers to browse products and services, compare prices, place orders, and make payments using Government purchase cards.

Electronic Commerce (EC): The interchange and processing of information using electronic techniques for accomplishing business within the framework of commercial standards and practices. An integral part of implementing EC is the application of business process improvement or reengineering principles to streamline business processes prior to the incorporation of technologies facilitating the electronic exchange of business information.

Electronic Commerce Infrastructure (ECI): A system designed to communicate and sustain the exchange of EC transactions between the Federal Government and industry users of the ECI.

Electronic Commerce Infrastructure (ECI) Provider: A department, service, or Agency within the Federal Government; a commercial Value Added Network (VAN); or other entity that transmits, receives, sorts, and provides access to EC messages and/or transactions.

Electronic Commerce Interoperability Process (ECIP): A service provider that offers procedures and guidelines for supporting functional areas, this process has replaced the Value Added Network (VAN) Licensing Agreement (VLA).

Electronic Data Interchange (EDI): The computer-to-computer electronic exchange of business information, using a specified format, between Trading Partners.

Electronic Data Interchange for Administration, Commerce, and Transportation (EDIFACT): An international UN-sponsored EDI standard primarily used in Europe and Asia. An alignment is envisioned between ANSI ASC X12 and EDIFACT EDI standards in the future to create a single global EDI standard.

Electronic Data Interchange (EDI) Standards: Rules by which business data are translated into a computer-readable format for electronic transmission to a Trading Partner's computer for processing. Also known as ANSI ASC X12 standards in the U.S.

Electronic Funds Transfer (EFT): The electronic exchange of payment and remittance information.

Electronic Mailbox: A holding location for EDI transactions, generally provided by a VAN to its customers. The customers would normally dial-up and connect to their EDI mailboxes to download and upload transactions.

Electronic Mall (EMALL): A Web site consisting of several ECATs spliced together, providing vendor information to Federal Government customers using Internet technology, search engines, distributed databases, and credit card ordering. It is a flexible system which provides more services at a price that is reasonable.

Electronic Signature: A code or symbol that is the electronic equivalent of a written signature. Also called Digital Signature.

EMALL: See *Electronic Mall*.

Encryption: The process that scrambles the contents of a file before sending it over the Internet, for protection of the data. The recipient must have software to "decrypt" this file, which is held only by authorized recipients. The authorized user will need to unscramble the data and read the message.

Enveloping: An EDI software function that groups all documents of the same type, bound for the same destination, into an electronic envelope.

Event-Driven EDI: EDI processing triggered by predetermined criteria, such as the receipt of a Purchase Order from a specific Trading Partner.

Federal Stock Class (FSC) Code Number: Code developed by the Defense Logistics Agency (DLA) for use in DoD's supply management program.

Field: The smallest meaningful unit of information in a data record. Examples: first name, last name, address, etc.

Flat File: An ASCII data file produced by a business application that is converted into ANSI ASC X12 format by translation software, and vice versa. It typically uses fixed-length format rather than variable length ANSI ASC X12 format. Also known as a User Defined File (UDF).

FSC: See *Federal Stock Class Code Number*.

Functional Acknowledgment: An ANSI ASC X12 Transaction Set (997) that is produced by translation software upon receiving and validating an EDI transaction set, and sent to the sender.

Functional Group: A grouping of related transaction sets belonging to the same class. For example, a functional group may include a Purchase Order, Purchase Order Acknowledgment, etc.

Functional Group Envelope: A grouping of related transaction sets belonging to the same class, enclosed by a functional group header and functional group trailer segments.

Header: The segment that indicates the start of an entity that is to be transmitted. Headers are control structures.

Header Area: The area of the transaction set that contains preliminary information pertaining to the entire document, such as the date, company name, address, Purchase Order number, and terms.

HTML: See *Hypertext Markup Language*.

Hypertext Markup Language (HTML): A SGML-based language used to create Internet World Wide Web Pages that may incorporate hypertext links, text, graphics, sound, and video.

ICs: See *Implementation Conventions*.

IFBs: See *Invitation for Bids*.

Implementation Conventions (ICs): Subsets of EDI standards developed for ease-of-use within one industry. Such conventions generally define how segments, elements, and codes within a standard should be used. They also contain explanatory remarks.

Interchange: The exchange of information from one Trading Partner to another. A set of transaction sets or messages sent from one sender to one receiver at one time, delineated by an interchange control structure.

Interchange Envelope: One or more functional groups transmitted together, enclosed by an outer envelope consisting of an interchange header segment and an interchange trailer segment.

Interconnection: The connecting of two VANs so that documents can be exchanged between subscribers who do not use the same VAN.

Interface: A recognized and definable crossover point between two systems.

Interoperability: The ability of the systems, units, or forces to provide and receive services from other systems, units, or forces, enabling them to operate effectively together. The conditions achieved among communications-electronics systems or items of communications-electronic equipment when information or services can be exchanged directly and satisfactorily between them and/or their user.

Invitation For Bids (IFBs): The procedure concerning the display of invitations for bids in a public place, information releases to newspapers and trade journals, paid advertisements, and synopsizing in the *Commerce Business Daily*.

Loop: A repetition of a group of segments in a transaction set.

Loop ID: A unique code identifying a grouping of segments.

Loop Repeat: A number that identifies the maximum number of times a loop may be used in succession.

Mailbox: Part of the EDI network service set aside for a specific participant to hold that participant's messages. Part of an EDI Value-Added Network service that holds a customer's message/transaction sets until retrieved.

Mapping: The process of diagramming flat file data produced by a business application to ANSI ASC X12 format.

Maximum Use: A number indicating the maximum number of times a segment may be repeated in a single usage.

Modem: A hardware device that converts digital (computer) data into analog (audio) tones for transmission over a telephone network. The process is reversed when receiving data.

NAICS: See *North American Industrial Classification System Code*.

Network Acknowledgment: A response from the network indicating the status of an interchange envelope. For example, the response could indicate that the envelope was sent or delivered.

North American Industrial Classification System (NAICS) Code: A coding system used to identify specific industrial goods or services within the Federal Government.

Proprietary EDI Standards: Non-ASC X12, industry-specific, EDI standards developed by a group of companies in the same industry. Generally, the users of proprietary standards eventually migrate to using ANSI ASC X12 or EDIFACT standards.

PTAC: Procurement Technical Assistance Center.

Qualifier: A data element that gives a generic segment or a generic data element a specific meaning.

Real-Time EDI: EDI in which transaction sets are sent and received on-line and entire transactions can be completed in a single session. Presently, most EDI transactions are still in the store-and-retrieve or store-and-forward mode. Also known as interactive EDI.

Release: A title given to annual updates of ANSI ASC X12 standards by the Data Interchange Standards Association (DISA).

Request For Proposal (RFP): A formal document issued by an organization seeking assistance in completing a given task. RFPs, used most often in Federal Government contracting, describe the work to be completed, in general terms, and the criteria by which proposals from organizations seeking to bid on the job will be evaluated.

Request For Quote (RFQ): A formal document issued by an organization seeking assistance in completing a given task. RFQs are similar to Requests For Proposals (RFPs) but are generally used for more standardized products or services.

RFP: See *Request for Proposal*.

RFQ: See *Request for Quote*.

Security: The desired level of integrity, exclusiveness, availability, and effectiveness to protect data from loss, corruption, destruction, and unauthorized use.

Segment Identifier: A predefined code that identifies the segment.

Segment Terminator: A special character inserted in the segment immediately following the last data element transmitted, indicating the end of the segment. Commonly used segment terminators are NL (EBCDIC) and CR/LF (ASCII).

Sequence Table: A listing that indicates, for each type of transaction set area, the possible segment, their order, and their attributes.

SF: Standard Form.

SGML: See *Standard Generalized Markup Language*.

SIC: See *Standard Industrial Classification Code*.

Standard Form (SF) 129: Solicitation Mailing List Application. A standard form used by the Federal Government to collect information about contractors and to add them to solicitation mailing lists. Individual procurement offices collect information. In most cases, the EDI 838-contractor registration process supersedes the SF-129 form.

Standard Generalized Markup Language (SGML): An international standard to enable the electronic exchange of documents between dissimilar systems.

Standard Industrial Classification (SIC) Code: A coding system used to identify specific industrial goods or services within the Federal Government.

Store-and-Forward: The process of storing EDI transmissions in an electronic mailbox before delivering them to recipients.

Sub-Element: A data element that is used as part of a composite data element. For example, a data element and its qualifier can be sub-elements of a composite data element.

Synchronous Transmission: Data communications in which characters or bits are sent at a fixed rate, with the transmitting and receiving devices synchronized. This eliminates the need for start and stop bits, basic to asynchronous transmission, and significantly increases data throughput rates.

TPA: See *Trading Partner Agreement*.

Trading Partner: An organization or individual with whom information or data is accessed or exchanged. The term includes private industry, academia, and Federal Government entities.

Trading Partner Agreement (TPA): A written instrument of understanding, negotiated between EDI Trading Partners, which specifies contractual matters and protocols of governing

EDI transactions. These are generally used in the private sector among EDI Trading Partners. Within the Federal EDI acquisition context, Trading Partner Instructions (TPI) are issued by the Government to the vendor community and are used instead of a TPA.

Trailer: The ending segment of a set of segments. The trailer is part of a control structure.

Transaction Set: An EDI document or message composed of a group of segments, which in turn are composed of a group of data elements, that provide the data required to compose a standardized business document.

Transaction Set Header: Area of the transaction set that contains information about the entire document, such as the company name and address.

Transaction Set Line Item: Area of the transaction set that contains information about the actual item(s) that are being purchased, sold, transferred, etc., such as quantities, descriptions, and prices.

Transaction Set Summary: Area of the transaction set that contains control information and other data relating to the total transaction area, such as the total line items and total amount due.

Translation Software: Software that translates an incoming ANSI ASC X12 transaction set into an ASCII flat file or vice versa. Also known as EDI management software.

Value-Added Network (VAN): A third-party communications company that transmits, receives, and stores EC transactions on behalf of their customers. VANs may also provide additional services known as Value Added Services. Also known as an EDI Service Bureau.

Value-Added Service (VAS): Additional EDI-related service provided by a VAN.

VAN: See *Value Added Network*.

VAS: See *Value Added Service*.

Version: A title given to the updates of ANSI ASC X12 standards as officially approved by ANSI, approximately every 3 years.